



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

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Director

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VWP Individual Permit Issuance Number 08-0619

Effective Date: May 3, 2010

Minor Modification No. 1 Date: November 15, 2010

Expiration Date: May 2, 2025

### VIRGINIA WATER PROTECTION PERMIT ISSUED PURSUANT TO THE STATE WATER CONTROL LAW AND SECTION 401 OF THE CLEAN WATER ACT

Based upon an examination of the information submitted by the owner, and in compliance with § 401 of the Clean Water Act as amended (33 USC 1341) and the State Water Control Law and regulations adopted pursuant thereto, the State Water Control Board (board) has determined that there is a reasonable assurance that the activity authorized by this permit, if conducted in accordance with the conditions set forth herein, will protect instream beneficial uses and will not violate applicable water quality standards. The board finds that the effect of the impact, together with other existing or proposed impacts to surface waters, will not cause or contribute to a significant impairment to state waters or fish and wildlife resources.

**Permittee:** Amherst County Service Authority

**Address:** P.O. Box 100, Madison Heights, VA 24572

**Activity Location:** The H.L. Lanum Water Treatment Plant and River View Road along the James River

**Activity Description:** The temporary disturbance of approximately 0.735 of an acre of the James River bottom for construction and operation of a permanent surface water intake structure; the placement of fill in approximately 0.018 of an acre of Harris Creek for the replacement of an existing riprap dam with a new concrete dam of approximately the same dimensions and in the same location; the continued impoundment of approximately 1,250 linear feet of Harris Creek behind the replaced dam; the installation of a stream flow gage on Harris Creek; a total maximum surface water withdrawal of 3.0 million gallons per day (mgd) from the combined sources of Harris Creek and the Graham Creek Reservoir; the withdrawal of surface water from the permanent James River intake to refill the Graham Creek Reservoir in accordance with the permit Special Conditions; the withdrawal of surface water from Harris Creek in accordance with the permit Special Conditions; and the implementation of water conservation measures.

The permitted activity shall be in accordance with this Permit Cover Page, Part I - Special Conditions, Part II - General Conditions, and the State Program General Permit 07-SPGP-01.

Allen Bilinsky  
Director, Water Division

November 15, 2010  
Date

*A. Authorized Activities*

This permit authorizes the following impacts as indicated in the application materials dated April 1, 2008, received by DEQ on April 10, 2008, and deemed complete by DEQ on June 3, 2008, as well as additional correspondence from the applicant dated June 10 and 23, 2008; September 25, 2008; November 20, 2008; January 9, 2009; February 11, 2009; April 3, 2009; November 12, 18, 24, and 25, 2009; December 17, 2009; and February 5 and 15, 2010.

1. The permanent backflooding of 1,250 linear feet of Harris Creek and the permanent fill of 0.018 of an acre of Harris Creek for the replacement of the existing riprap dam with a concrete dam of approximately the same dimensions in the same location. The installation of a temporary cofferdam is authorized for use in the Harris Creek dam replacement provided that the permittee complies with all applicable conditions of this permit.
2. The installation of a temporary cofferdam in the James River not exceeding 641 feet in length to a point channelward from the river bank and not exceeding 50 feet in width along this entire length (total of 0.735 of an acre), and the dewatering within the cofferdam for installation of the intake structure. Temporary excavation of the river bottom within the temporary cofferdam is authorized provided the permittee complies with all applicable conditions of this permit.
3. The temporary use of mechanical equipment in surface waters when conducted according to the permit conditions in Part I.C and Part I.D below.
4. The installation of a stream flow gage in Harris Creek.
5. The withdrawal of surface water from Harris Creek, the James River, and Graham Creek Reservoir in accordance with all of the permit conditions, and more specifically detailed in Part I.E of these Part I Special Conditions.

*B. Permit Term*

This permit is valid for 15 years from the date of issuance. A new permit may be necessary for the continuance of the authorized activities, including water withdrawals, or any permit requirement that has not been completed such as compensatory mitigation provisions. At least **120 calendar days** prior to the expiration of this permit, the permittee shall notify DEQ in writing of his or her intent to continue one or more of the authorized activities. A new permit application may be required by DEQ at that time. DEQ, acting on behalf of the State Water Control Board, may issue a new permit or may issue a new permit with new or modified conditions, or the Board may deny the issuance of a permit at that time.

*C. Standard Project Conditions*

1. The activities authorized by this permit shall be executed in such a manner that any impacts to stream beneficial uses are minimized. As defined in §62.1-10(b) of the Code, “beneficial use” means both instream and offstream uses. Instream beneficial uses include, but are not limited to, the protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. Offstream beneficial uses include, but are not limited to, domestic (including public water supply), agricultural, electric power generation, commercial, and industrial uses. Public water supply uses for human consumption shall be considered the highest priority.
2. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species that normally migrate through the area, unless the primary purpose of the activity is to impound water.
3. Flows downstream of the project area shall be maintained to protect all uses.
4. No activity shall cause more than minimal adverse effect on navigation, and no activity shall block more than half of the width of the stream at any given time.
5. The activity shall not impede the passage of normal or expected high flows, and any associated structure shall withstand expected high flows.
6. All in-stream activities shall be conducted during low-flow conditions whenever practicable.
7. Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities.
8. All excavation, dredging, or filling in surface waters shall be accomplished in a manner that minimizes bottom disturbance and turbidity. Turbidity levels downstream of the construction site shall not exceed turbidity levels upstream of the construction site at any time.
9. All construction, construction access, and demolition activities associated with this project shall be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by this permit. Wet, excess, or waste concrete shall be prohibited from entering surface waters. An exception to this condition is the pouring of concrete within the confined area of a dewatered cofferdam, where the wet, unset concrete shall not come in contact with flowing water.
10. Temporary in-stream construction features such as cofferdams shall be made of non-erodible materials.

11. Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters.
12. Stormwater runoff shall be prohibited from directly discharging into any surface waters. Best management practices (BMP) designed, installed, and maintained, as described in the Virginia Erosion and Sediment Control Handbook (Third Edition, 1992, or the most recent version in effect at the time of construction) and the Virginia Stormwater Management Handbook (First Edition, 1999, or the most recent version in effect at the time of construction), shall be deemed suitable treatment prior to discharge into surface waters. Installation of alternative practices not described in these references shall be submitted to DEQ for approval prior to beginning construction.
13. Erosion and sedimentation controls shall be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, or the most recent version in effect at the time of construction. These controls shall be placed prior to clearing and grading activities and shall be maintained in good working order, to minimize impacts to surface waters. These controls shall remain in place only until clearing and grading activities cease and these areas have been stabilized.
14. Heavy equipment is authorized for use within the stream channel during project construction or stream restoration activities when site conditions prohibit access from the streambank. The equipment shall be stationed on cobble bars and the activities conducted in the dry or during low flow conditions, whenever possible.
15. All *non-impacted* wetlands, streams, and designated upland buffers that are within the project or right-of-way limits, and that are within fifty feet of any project activities, shall be clearly flagged or demarcated for the life of the construction activity within that area. All non-impacted open water areas within the project or right-of-way limits, and that are within fifty feet of any project activities, shall be clearly flagged or demarcated, as practicable, for the life of the construction activity within that area. The permittee shall notify all contractors and subcontractors that *no activities are to occur in these marked areas*.
16. Temporary disturbances to wetlands, stream channels, and/or stream banks during project construction activities shall be avoided and minimized to the maximum extent practicable.
17. All temporarily disturbed wetland areas shall be restored to preconstruction conditions within **30 calendar days** of completing work in the areas, which shall include re-establishing pre-construction contours, and planting or seeding with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested), except for invasive species identified on DCR's Invasive Alien Plant Species of Virginia list. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed surface waters through the **second year post-disturbance**.

18. All temporarily impacted streams and stream banks shall be restored to their original elevations and contours within **30 calendar days** following the construction at that stream segment, and the banks shall be seeded or planted with the same vegetative cover type originally present along the banks, including supplemental erosion control grasses if necessary, but not including invasive species identified on DCR's Invasive Alien Plant Species of Virginia list. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed surface waters through the **second year post-disturbance**.
19. All materials (including fill, construction debris, excavated materials, and woody materials, but not including metal sheet piling) that are temporarily placed in wetlands, in stream channels, or on stream banks shall be placed on mats or geotextile fabric, shall be immediately stabilized to prevent the material or leachate from entering surface waters, and shall be entirely removed within **30 calendar days** following completion of that construction activity. After removal of materials, and sheet piling if applicable, disturbed areas shall be returned to original contours, shall be stabilized, and shall be restored to the original vegetated state within **30 calendar days**. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed surface waters, including submerged aquatic vegetation, through the **second year post-disturbance**.
20. Seeds used for all project and compensation activities shall conform to the Virginia Seed Law (Sections 3.1-262 Code of Virginia) and Virginia Seed Regulations (2 VAC 5-290-10 et seq).

*D. Projects Involving Stream Modifications, Including Intake/Outfall Structures*

1. The permanent intake structure in the James River shall be designed with screens having a maximum through-screen intake velocity of 0.25 feet per second and a maximum mesh opening width of one millimeter (1 mm).
2. Any exposed slopes or streambanks shall be stabilized immediately upon completion of work in each impact area. Methods and materials for stabilization shall be in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, or the most recent version in effect at the time of construction.
3. Redistribution of existing stream substrate for erosion control purposes is prohibited.
4. Material removed from the stream bottom shall not be deposited into surface waters unless otherwise authorized as fill material in this permit.
5. Riprap apron for all outfalls shall be designed in accordance with Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, or the most recent version in effect at the time of construction.

6. For streambank protection activities, structures and backfill shall be placed as close to the streambank as practical, while still avoiding and minimizing impacts to vegetated wetlands to the maximum extent practical. No material shall be placed in excess of the minimum necessary for erosion protection.
7. Asphalt and materials containing asphalt or other toxic substances shall not be used in the construction of submerged sills, breakwaters, dams, or weirs.

**E. Water Withdrawal and Minimum Instream Flow Conditions**

1. A total surface water withdrawal volume of 3.0 million gallons per day (mgd) shall be authorized from the combined sources of Harris Creek and Graham Creek Reservoir in accordance with the conditions of this final permit.
2. Surface water withdrawals from the permanent James River intake shall be authorized to refill Graham Creek Reservoir as detailed in Table 1 below. No withdrawal from the James River is authorized unless the usable reservoir volume triggers in Table 1 are reached.

Maximum Withdrawal (MGD)	Table 1: Usable Reservoir Volume Remaining Trigger (%) for James River Withdrawal											
	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
1.5	<60	<65	<75	<85	<90	<90	<85	<80	<75	<70	<65	<60
2.0 <sup>1</sup>	<50	<55	<65	<75	<80	<80	<75	<70	<65	<60	<55	<50
3.0 <sup>2</sup>	<35	<40	<50	<60	<65	<65	<60	<55	<50	<45	<40	<35
<p><b>1</b> Voluntary water conservation measures shall be applied in the Amherst County Service Authority service area, as detailed in the most current version of the Region 2000 Regional Drought Response and Contingency Plan.</p> <p><b>2</b> Mandatory water conservation measures shall be applied in the Amherst County Service Authority service area, as detailed in the most current version of the Region 2000 Regional Drought Response and Contingency Plan.</p>												

3. Prior to the completion of the permanent James River intake, withdrawals from the James River on an emergency basis may be authorized as detailed in the Federal Energy Regulatory Commission *Order Allowing Non-Project Use of Project Water Under Article 202; Issued December 10, 2003*.
4. A minimum in-stream flow rate (cfs) shall pass the existing dam or a future replacement dam in Harris Creek at the H.L. Lanum Water Treatment Plant and shall be monitored in accordance with Part I.F.1. *Prior to* the completion of the permanent James River intake, the daily withdrawal rate from Harris Creek shall not exceed 30 percent of the seven-day

rolling average stream flow (cfs), as calculated by averaging the daily instantaneous flow rate for the prior seven calendar days. *Following* the completion of the permanent James River intake, the daily withdrawal rate from Harris Creek shall not exceed 10 percent of the seven-day rolling average stream flow (cfs), as calculated by averaging the daily instantaneous flow rate for the prior seven calendar days. Discharge from the H.L. Lanum Water Treatment Plant shall be considered part of the natural stream flow due to its proximity to the intake structure for the plant. The flow withdrawn shall not exceed the maximum total limit established in Part I.E.1.

F. *Monitoring, Notification, and Reporting*

**Monitoring**

1. The permittee shall be responsible for the installation of a stream flow gage that measures the in-stream flow rate in the vicinity of the intake structure upstream of the existing dam, or the future dam, on Harris Creek. Installation of the gage shall be coordinated with the United States Geological Survey (USGS) to determine the appropriate location and type of gage. Installation of the gage shall be completed no later than December 31, 2011. Operation and maintenance of the gage shall be the responsibility of the permittee, unless the USGS agrees to take possession of the gage. DEQ shall be provided a copy of any such agreement at the address in Part I.F.3.

Until the gage is operational and calibrated, the flow rate in Harris Creek will be estimated by multiplying the 7-day, rolling-average flow rate (cfs) at the surrogate Tye River gaging station (USGS 02027000) by a drainage area factor of 0.38. This *estimated* flow rate shall then be used to determine the amount of surface water flow that may be withdrawn from Harris Creek in accordance with Part I.E.4.

As soon as the gage is calibrated, the flow rate to be passed by the existing dam or a future replacement dam in Harris Creek shall be monitored using the installed gage. The *recorded* flow rate shall be used to determine the amount of surface water flow that may be withdrawn from Harris Creek in accordance with Part I.E.4.

2. The permittee shall conduct photographic monitoring of pre-construction conditions in permitted, temporary or permanent impact areas covered by this permit; of all work conducted in impact areas covered by this permit; and of post-construction conditions in impact areas covered by this permit, except for installation of the gage in Harris Creek. Photos shall also document any non-compliant events or problems encountered during the construction activities. For work being conducted in phases, or only in certain impact areas at the same time, monitoring may begin upon initiating work in those specific permitted impact areas.

The photos shall be of sufficient quantity to thoroughly document the environmental conditions and activities being conducted at the impact areas. Photographic monitoring shall be conducted by the following method: Enumerated photograph (photo) stations

shall be established at each permanent or temporary permitted impact area and shall be consistent for the duration of construction activities. Photo stations may be established via water craft or temporary floating structures. Photos will be taken from the same directional orientation during each monitoring event. Each photo taken shall be labeled with the photo station number, the permitted impact location, the photo orientation, the date and time of the photo, the name of the person taking the photo, and a brief description of the activities being conducted at the time of the photo. If necessary, this information may be provided on (a) separate sheet(s) of paper attached to the photos.

Pre-construction photos shall be submitted with the ten-day notification (Part I.F.4) to DEQ that land disturbing or construction activities are planned to begin. Photos taken during construction activities shall be submitted as part of the construction monitoring reports detailed in Part I.F.11. Post-construction photos shall be submitted to DEQ within 30 days of completing construction in each impact area, which may or may not coincide with the submittal of a scheduled construction monitoring report.

### Notification

3. Required notifications and submittals shall be submitted to the DEQ office stated below to the attention of the VWP permit manager, except for the annual water report detailed in Part I.F.12:

[Name]  
VWP Permit Manager  
Virginia Department of Environmental Quality  
P.O. Box 1105  
Richmond, VA 23218

4. The permittee shall submit written notification at least **ten calendar days** prior to the initiation of activities in permitted areas, excluding the installation of the gage in Harris Creek. The notification shall include a projected schedule for initiating and completing work at each permitted impact area.
5. Any fish kills or spills of fuels or oils shall be reported to DEQ Blue Ridge Regional Office-Lynchburg immediately upon discovery at 434-582-5120. If DEQ cannot be reached, the spill shall be reported to the Virginia Department of Emergency Management (DEM) at 1-800-468-8892 or the National Response Center (NRC) at 1-800-424-8802.
6. DEQ shall be notified in writing within **24 hours or as soon as possible on the next business day** when potential environmentally threatening conditions are encountered which require debris removal or involve potentially toxic substances. Measures to remove the obstruction, material, or toxic substance or to change the location of any structure are prohibited until approved by DEQ.

7. The permittee shall notify the DEQ of any additional impacts to surface waters, including wetlands; of any modifications of the dam or associated structures or to intake structures; and of any change to the type of surface water impacts associated with this project. Any additional impacts, modifications, or changes shall be subject to individual permit review and/or modification of this permit. Compensation may be required.

### Reporting

8. A final construction report shall be submitted by the permittee no later than 60 days after the installation of the gage in Harris Creek that is required by Part I.F.1. The report shall include a description of the in-stream activities conducted; any plan sheets or specifications developed for the gage; the latitude and longitude of the gage; all measurements or calibrations associated with operation of the gage; the name and address of the entity that conducted the gage installation; the date on which the gage installation began and ended; and four photographs of the gage, including at least one photograph viewing the gage in an upstream direction, and at least one photograph viewing the gage in a downstream direction.
9. Within 60 days of the Harris Creek gage becoming operational, the permittee shall submit a contingency plan for DEQ approval that details the procedures and equipment that shall be used to measure the flow rate should the gage fail or be damaged.
10. Final plans for the project activities authorized by this permit, except for installation of the gage in Harris Creek, shall be submitted **30 calendar days** prior to initiating any activity affecting permitted impact areas. Activities except for installation of the gage in Harris Creek shall not be initiated in permitted impact areas until DEQ has both reviewed and commented on the plans, or until **30 calendar days** have passed and DEQ has not provided comments regarding the plan. In the event DEQ submits comments on the final plans, construction shall not proceed until comments are resolved to DEQ's satisfaction.

Permitted activities except for installation of the gage in Harris Creek shall be performed in accordance with the final project plans submitted to DEQ. Final project plans shall include the location and orientation of all photo monitoring stations. Any changes to the final project plans shall be submitted to DEQ immediately upon determination that the changes are necessary. DEQ approval shall be required prior to implementing the changes.

11. Construction monitoring reports shall be submitted to DEQ monthly throughout the construction period when work is conducted in impact areas, except for installation of the gage in Harris Creek. Each report shall be due no later than the 15<sup>th</sup> of the month that follows the month for which the report is being prepared (for example, a report for January activities is due by February 15<sup>th</sup>). The reports shall include the following, as applicable:

- a. A written narrative stating whether or not work, including installation and maintenance of erosion and sediment controls, was performed in each permitted impact area during the monitoring period. If work was performed, the narrative shall include a description of the major work items performed, when those items were initiated, when those items are expected to be completed, and any non-compliant events or problems encountered.
  - b. A written summary of any corrective actions taken and any subsequent notifications to DEQ regarding non-compliant events or problems encountered during construction activities in permitted impact areas.
  - c. A summary of anticipated work to be completed during the next monitoring period in all permitted impact areas.
  - d. A labeled site map showing each permitted impact area where work activities occurred during the monitoring period and the photo stations used to document the activities.
  - e. The photos taken during the monitoring period, per Part I.F.2.
12. The permittee shall report all authorized surface water withdrawals to the DEQ Office of Surface and Groundwater Supply Planning at P.O. Box 1105, Richmond, Virginia, 23218 by **January 31<sup>st</sup>** of the year following the year in which the withdrawals occurred. *Reporting surface water withdrawals in accordance with the conditions of this permit satisfies the reporting requirement for Water Withdrawal Reporting Regulation 9VAC25-200-10 et seq.* The annual monitoring report shall contain the following information at a minimum:
- a. the permittee's name and address;
  - b. the VWP permit number (08-0619);
  - c. the permittee's assigned facility identification number for reporting surface water withdrawals under 9VAC25-200-10 et seq;
  - d. each water withdrawal source and the location (latitude and longitude) of the withdrawal point;
  - e. for each source, the total volume (million gallons) of water withdrawn each month of the year and a total annual volume (million gallons) withdrawn;
  - f. for each source, the largest single day withdrawal volume (million gallons) that occurred in the year and the month in which it occurred;
  - g. for each source, the method of measuring the withdrawal;

- h. *prior to the calibration of the Harris Creek gage:* the calendar date, the daily recorded stream flow (cfs) at the Tye River Gage Station, the 7-day rolling average flow based on the daily flow at the Tye River Gage Station, the 7-day rolling average flow in Harris Creek as estimated from the Tye River Gage Station, the maximum authorized withdrawal (cfs) from Harris Creek in accordance with Part I.E.4, and the flow (cfs) withdrawn from Harris Creek

*after the calibration of the Harris Creek gage:* the calendar date, the daily recorded stream flow (cfs) at the Harris Creek gage, the 7-day rolling average flow based on the recorded daily flow at the Harris Creek gage, the maximum authorized withdrawal (cfs) from Harris Creek in accordance with Part I.E.4, and the flow (cfs) withdrawn from Harris Creek;

- i. the daily pool elevation of the Graham Creek Reservoir and associated percent of usable storage remaining; and
  - j. any periods when voluntary or mandatory water conservation measures were implemented (mm/dd/yyyy to mm/dd/yyyy).
13. All reports required by this permit and other information requested by DEQ shall be signed by the permittee, or a person acting on the permittee's behalf as a duly authorized representative with the authority to bind the permittee.

A person is a duly authorized representative only if 1) the authorization is made in writing by the permittee; AND 2) the authorization specifies either the named individual or the named position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility.

If a change of the duly authorized representative occurs, the permittee shall immediately notify DEQ in writing, providing the new named individual or named position and contact information for the new duly authorized representative.

14. All submittals shall contain the following signed certification statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."